

Amendments to the Specification

Please replace paragraph [0001] at page 1 with the following amended paragraph:

[0001] This application is a continuation-in-part of and claims priority under 35 U.S.C. 120 to U.S. application serial no. 09/841,154, ~~to be~~ which issued on December 16, 2003 [[,]] as U.S. Patent 6,664,893, the disclosure of which is incorporated by reference.

Please add the following new paragraph after paragraph [0019] at page 6:

[0019.1] Figure 3 is a block diagram of an apparatus for remotely monitoring a subject.

Please replace paragraph [0020] at page 6 with the following amended paragraph:

[0020] Figure 1 depicts a flow diagram of a method of controlling access to a medical monitoring device and/or service. A medical monitoring device and its associated system are provided (20). The medical monitoring device and medical monitoring system may be of any operable type, such as that disclosed in US Patent 5,959,529 (hereafter, "the '529 patent"), whose disclosure is incorporated by reference in its entirety, and/or modified as discussed herein.

Please replace paragraph [0026] at page 8 with the following amended paragraph:

[0026] The base station 56 may perform a preliminary evaluation of the set of identification data elements, for example, such as to determine by using a software utility program whether the identification data elements meet a set of one or more format requirements. Such basic format requirements may be specified for each of the identification data elements. For example, a format requirement may specify that a patient name is to include only alphanumeric characters. If as typed into the keyboard the patient name includes other characters (e. g., a percent sign %), software running in the base station can recognize the error and provide an input diagnostic message through the display 68 to prompt the input of correct information. In another example, a format requirement may specify that a user's social security number must contain ~~10~~ 9 numerical digits and may not contain letters or other characters.

Please add the following new paragraphs after paragraph [0035] at page 12:

[0035.1] As shown in FIG. 3, an apparatus 110 for remotely monitoring and assessing the status of a subject includes a portable monitoring unit 112 and a central monitoring device 114, which may communicate via by a wireless communication link 116.

[0035.2] The portable monitoring unit 112 includes a sensor interface unit 120 having a microprocessor 122 with multiple inputs and outputs, illustrated in a bus architecture. Communication of the microprocessor 122 with the wireless communication link 116, and thence with the central monitoring device 114, is effected through a communications device interface 124 and a first transceiver 126 of the wireless communication link 116. Information is gathered by one or more sensors 128. It is preferred that the wireless communication link 116 be a digital wireless communication link, but an analog link may be used instead. The sensors 128 may include internal sensors 128a embedded in the portable monitoring unit 112 and/or external sensors 128b that are connected to the portable monitoring unit through appropriate external interfaces 130. (In FIG. 3, the external interface 130 is illustrated as part of the portable monitoring unit 112, but it may be external to the portable monitoring unit.) The external sensors 128b may be any type that may be interfaced with the microprocessor 122 through the interface 130. For example, the interface 130 may be a standard serial or parallel interface, a PCMCIA interface, or an Ethernet interface. An external programming device or other device may also be connected to microprocessor 122 through the appropriate external interface 130.

[0035.3] An optional manual input device 132 communicating with the microprocessor 122 is accessible from the exterior of the portable monitoring unit 112, to allow a user or subject of the portable monitoring unit to provide information to the microprocessor 122. The manual input device 132 may be as simple as a switch such as a push button, or more complex such as a keypad. Optionally, a display 134, such as a liquid crystal display, and an audio and/or visual communicator 136, such as a tone generator, speaker, or flashing light, may be provided to signal the user of the portable monitoring unit 112 to take responsive action. An external port 137, such as a serial or a parallel communication port, is provided to permit information or reprogramming instructions to be input to the microprocessor 122 at the site of the portable monitoring unit 112. (A compatible sensor may also be connected through the external port 137.)

The manual input device 132, the display 134, the audio and/or visual communicator 136, and external port 137 are each optional features that may be provided for specific applications.

[0035.4] The microprocessor 122 may be a Multi-Chip Package (MCP) such as the currently available Vadem VG330, the Advanced Micro Devices AMD Elan SC400, the NEC HHT-ASSP, or the ZF MicroSystems SMX/386. The microprocessor includes a power management unit which permits the microprocessor to be placed into an inactive state or awakened to an active state by a proper signal. The power management achieves conservation of the power of the power supply 142. The microprocessor is typically provided with memory 144, which may be a random access memory, a readonly memory, a mass storage device, or any combination of these types of memory. This memory may be shared with other components of the portable monitoring unit 112. The first transceiver 126 may be a single-board digital wireless module such as a WIT915 or WIT2500M marketed by Digital Wireless Corporation, with the appropriate interface 124. The first transceiver 126 has its own power management unit that permits the transceiver to be placed into an inactive state or awakened to an active state by a proper signal.

[0035.5] A location-determining device 138 is provided so that the location of the portable monitoring unit 112 may be determined. The location-determining device 138 is preferably a global positioning system (GPS) receiver having an antenna 140 shared with the antenna of the first transceiver 126. The GPS receiver may be a MicroTracker LP global positioning system receiver module available from Rockwell Semiconductor Systems. Other types of location-determining devices 138 such as those based upon cellular cell-site position triangulations, LORAN, and the like, may also be used.

[0035.6] A power supply 142 such as a battery provides power for the components of the portable monitoring unit 112 requiring power, and optionally for the external sensor 128b and the external interface 130. In FIG. 3, the power connections between the powered components and the power supply 142 are indicated by "PS" to avoid the need for drawing the interconnections that would obscure the data-communications paths.

[0035.7] The central monitoring device 114 includes at least a second transceiver 150 of the wireless communication link 116, to establish communications between the first transceiver 126 of the portable monitoring unit 112 and the central monitoring device 114. Typically, the

central monitoring device 114 further includes a terminal 152 having a communications device interface 158 to the second transceiver 150, and connections to a display 154 that may be viewed by an operator 156. The terminal 152 may be a simple manual system, or, preferably, it may be a more complex as illustrated. In this more complex terminal 152, there is a computer 160 that communicates with the display 154 and communicates with and oversees the operations of the portable monitoring unit 112 in the manner to be discussed subsequently. The central monitoring device 114 may also be provided with a location-determining device 162, particularly if the central monitoring is movable or portable and its location must be determined. The location-determining device 162 has an antenna 164 shared with the antenna of the second transceiver 150. The location-determining devices 138 and 162 are typically selected to be compatible. If, for example, the location-determining device 138 is an autonomous GPS receiver, the location-determining device 162 normally is also a GPS receiver. On the other hand, the location-determining technique may utilize a triangulation, time-of-flight, or other type of measurement that requires coordination between the location-determining devices 138 and 162, which are then chosen with that technique in mind.